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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,993	04/10/2006	Keiichi Yamamoto	ES/4676-916	1366

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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

PAUL, JESSICA MARIE

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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11/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,993	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Jessica Paul	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 8, 9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 8, 9, and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 6, 11, and 12 are objected to because of the following informalities: claims 6, 11, and 12 are directed to a coating system, however dependent on the composition. Specifically, the coating system of claims 6, 11, and 12 do not further limit the structure of the composition recited in claim 1. It is suggested that the instant claims be written in independent form. Appropriate correction is required.

Claims 8, 9, and 14 are objected to because of the following informalities: claim 8 is directed to a method, and claims 9 and 14 are directed to an article; however both are dependent on the composition. Specifically, the process steps of method claim 8, do not further limit the structure of the composition recited in claim 1. Similarly, the article structure of claims 9 and 14 do not further limit the structure of the composition recited in claim 1. It is suggested that the instant claims be written in independent form. Appropriate correction is required.

Claims 11-14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 11-14 are intended use claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 6, 8, 9, and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shustack (U.S. Patent No. 5146531) and further in view of Inui et al. (US Patent No. 5889095).

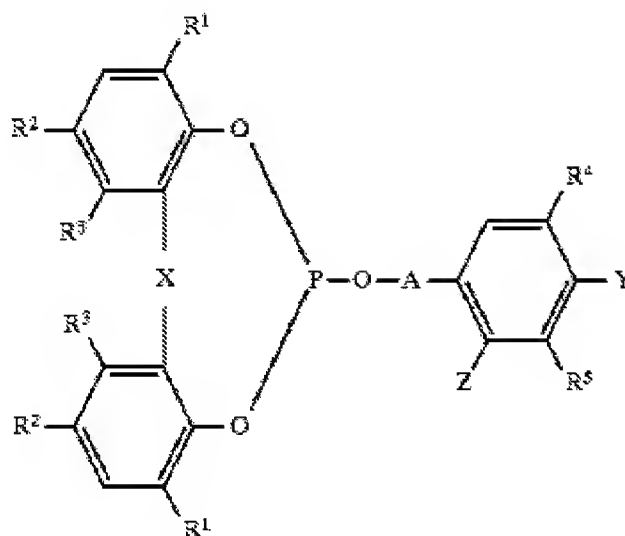
Regarding claim 1: Shustack teaches an ultraviolet radiation-curable primary and secondary coating composition for optical fibers [abs], wherein the primary coating composition comprises: (A) 20-80% by weight of the total composition of a urethane acrylate system (urethane (meth)acrylate) [col7, line1], (B) 5-50% by weight of the total composition of an alkyl acrylate or (meth)acrylate-based monomer (reactive diluent) [col9, line8], and optionally (C) 0.1-3% by weight of the total composition of a stabilizer such as organic phosphites, hindered phenols, mixtures thereof, and the like, which can be employed in both the primary coating [col12,line42] and the secondary coating compositions [col15, line20-25].

Shustack fails to teach the specified organic phosphite stabilizer as required by instant formula (1).

Inui et al. discloses a phosphite stabilizer for organic material represented by the following formula (1):

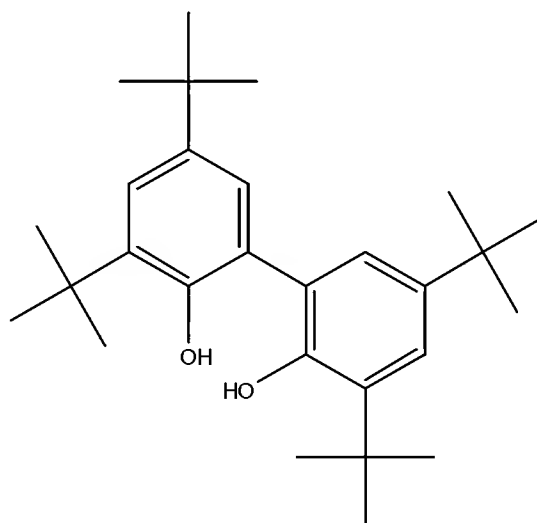
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(1)



Wherein R¹, R², R⁴, and R⁵ can be an alkyl; R³ is hydrogen; X is a direct bond; A is an alkylene group having 2 to 8 carbon atoms; and one of Y and Z represent a hydroxyl [col1,line65-col2, line33]. Inui et al., discloses in a preferred embodiment, reacting 3,3',5,5'-tetra-t-butylbiphenyl-2,2'-diol (corresponding to Formula II, [col4, line1-9])

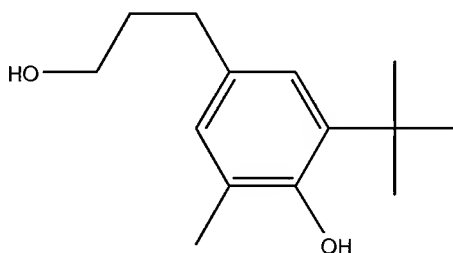
Formula II



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with phosphorous trichloride and triethylamine. The mixture is then reacted with 3-(3-t-butyl-4-hydroxy-5-methylphenyl)propanol (corresponding to Formula III [col4, line12-20]), via the propanol moiety.

Formula III



The reaction product, as disclosed in Example 9 by Inui et al., reads on applicants' required formula (1) [ex9, col25, line20-45]. Inui et al. discloses the stabilizers are suitable for ethylenically unsaturated resins, such as (meth)acrylic resins and unsaturated polyester resins [col12, line30; col12, line47]. Shustack and Inui et al. are analogous because they are both concerned with the same field of endeavor, namely organic materials and/or compositions, which contain phosphite stabilizers and are employed in ethylenically unsaturated resins. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the organic phosphite stabilizer of formula (1), as disclosed by Inui et al., in the coating composition as taught by Shustack, and would have been motivated to do so in order to produce a coating composition having excellent stability to heat deterioration and oxidation deterioration in production, processing, and use [Inui et al., col22, line9-14].

Regarding claims 6, 11, and 12; Shustack teaches an ultraviolet radiation-curable primary and secondary coating compositions for optical fibers [abs; col6, line8-11].

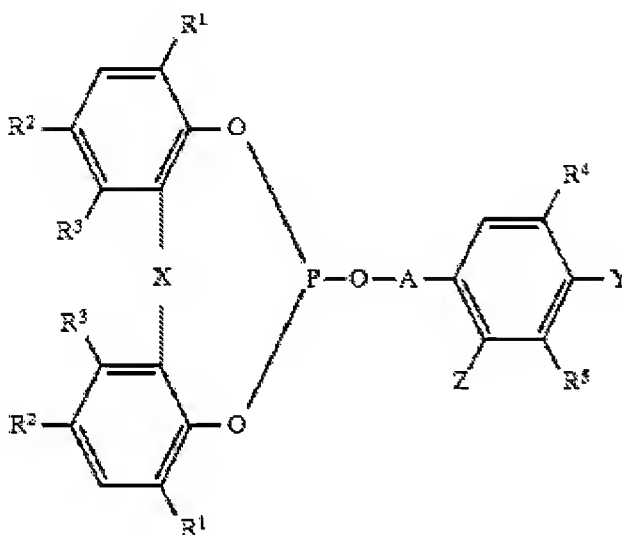
Regarding claims 8 and 9, Shustack discloses a process for preparing a coated optical fiber (instant claim 8), wherein the process comprises: (i) applying to an optical glass fiber a primary coating layer, (ii) applying atop said primary coating layer a secondary coating layer, and (iii) radiation-curing in situ said primary and secondary coating layers [col16, line1] (instant claim 9).

Claims 1, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop et al. (U.S. Patent No. 6714712) and further in view of Inui et al. (US Patent No. 5889095).

Regarding claim 1, 13, and 14; Bishop et al. disclose a radiation-curable coating, ink or matrix composition comprising: (A) a polyester (meth)acrylate oligomer; (B) a reactive diluent; and (C) a photoinitiator (col5, line36-42). Other oligomers can be present in addition to the polyester (meth)acrylate, such as an urethane (meth)acrylate oligomer [col17,line6-9]. The urethane (meth)acrylate oligomer is employed in an amount of from 0 to 40 wt% [col17, line27-31], which overlaps with the range required by the instant application. The reactive diluent is added in such an amount, to achieve a desired viscosity at room temperature [col17,line50-55]; such as about 20 wt% [ex1, col22, line38]. The composition may further comprise stabilizers, in particular color stabilizers, such as trisnonyl phenol phosphite, trisphenol phosphite, and the like. However, Bishop et al. fails to teach the specified organic phosphite stabilizer as required by instant formula (1).

Inui et al. discloses a phosphite stabilizer for organic material represented by the following formula (1):

(1)



Wherein R¹, R², R⁴, and R⁵ can be an alkyl; R³ is hydrogen; X is a direct bond; A is an alkylene group having 2 to 8 carbon atoms; and one of Y and Z represent a hydroxyl [col1,line65-col2, line33). Bishop et al. and Inui et al. are combinable because they are both concerned with the same field of endeavor, namely organic materials and/or compositions, such as thermoplastic resins, which contain phosphite stabilizers. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the organic phosphite stabilizer of formula (1), as disclosed by Inui et al., in the radiation curable ink or matrix composition as taught by Bishop et al., and would have been motivated to do so in order to produce a composition having excellent

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stability to heat deterioration and oxidation deterioration in production, processing, and use (Inui et al., col22, line9-14).

Response to Arguments

Applicant's arguments filed 9/23/09 have been fully considered but they are not persuasive.

In response to applicants' arguments that there is no motivation to combine Inui et al., directed to stabilizers for thermoplastic resins and which makes no mention of light or radiation curable resins, with Shustack, which is directed to radiation curable resins, the Examiner respectfully disagrees. Shustack a (meth)acrylate based resin teaches that to improve shelf life, the composition may further comprise a stabilizer, such stabilizers include organic phosphites [col12, line42-50]. Inui et al. teaches an organic phosphite stabilizer, which is effective for stabilizing the organic material against heat deterioration and oxidization deterioration (caused by prolonged shelf life), an example of the organic material includes (meth)acrylic resins. Although Inui et al. does not explicitly disclose the organic material is radiation curable, Inui et al. discloses (meth)acrylic resins, which are radiation curable. One having ordinary skill in the art, would assume a reasonable expectation of success because Inui et al. discloses the use of the required phosphite stabilizer in ethylenically unsaturated resins, such as (meth)acrylic resins.

In regards to example 9 in table 2 of Inui et al. vs. comparative examples 1 and 2 in table 2; Inui et al. teaches two different structures of dioxaphosphosphine based

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stabilizers, the comparative example 2 comprises a propionyloxy ethoxy group off of the dioxaphosphosphine group, which is not present in the invention of Inui et al. The small changes in chemistry, may be due to the structural differences of the stabilizers, not the method for curing.

Shustack (U.S. Patent No. 5146531) is still relied upon for the teaching of the radiation curable resin.

Inui et al. (US Patent No. 5889095) is still relied upon for the teaching of the organic phosphite stabilizer.

Bishop et al. (U.S. Patent No. 6714712) is still relied upon for the teaching of a radiation curable resin used for ink and matrix compositions.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Paul whose telephone number is (571)270-5453. The examiner can normally be reached on Monday thru Friday 8:00- 6:00p; alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

Jessica Paul
Examiner
Art Unit 1796

/JMP/